



User Manual lime-free Tank-O3 *fresh water system 2.0*

Congratulations on purchasing the renewed lime-free Tank-O3 *fresh water system 2.0*. From now on safe water in an always clean tank with hardly any maintenance!

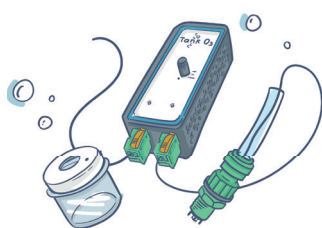
To install and use this extremely modern and environmentally friendly electrochemical equipment in the most favorable, effective and safe way for you, it is necessary that you adhere to the manual and instruction regulations below. We recommend that you have this equipment installed by an authorized dealer.

After initial installation, we recommend setting the Tank-O3 *fresh water system 2.0* to 200 mA, the maximum, for a few days in order to complete cleaning the tank as quickly as possible. Then rinse the tank thoroughly, change the water and set the system to the desired mA, for tanks up to 150 liters at 50 mA.

- **Always provide venting!** A vent is normally present if your vehicle has an outside filler cap.
- The system is suitable for use in plastic and stainlesssteel tanks, but **NOT** in metal and aluminum tanks!
- Never use in combination with additives.
- **Operation maintenance:** Every week / 2 weeks, preferably at a fixed time, top up the jar with lime-free water. See description on page 2.

* Like osmosis, softened, demineralized or distilled water.

Why a Tank-O3 *fresh water system 2.0*



Many people do not realize that the water quality in the clean water tank, especially at higher temperatures, deteriorates quickly. This results in contamination of the water, contamination of the tank and in the worst case an increased safety risk regarding to, among other things, legionella contamination. The Tank-O3 *fresh water system 2.0* is the solution, it is safe, environmentally friendly, 100% natural, no unpleasant smell or taste, the system takes care of everything for you. Intake of clean and drinkable water is not a problem. But what about the development of biofilm, legionella, E.coli, algae, bacteria, viruses and germs in your tank? Especially in warmer areas, the development of micro-organisms can be a danger!

The Tank-O3 *fresh water system 2.0* prevents this danger. From now on you simply always have the certainty of a biofilm-free, always clean tank and clean and safe water on board your motorhome, boat, caravan, tiny house, etc. The use of chemical agents is not desirable from an environmental point of view.

It also leaves unwanted taste and odor, furthermore, cleaning the tank is a laborious job, it is time consuming, and therefore it is often “forgotten”, even if the water has been in the tank for several weeks or even months! Therefore: Take care of yourself with the **unique, tasteless and odorless** Tank-O3 *fresh water system*.

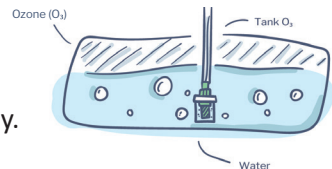
Operation of Tank-O3 *fresh water system 2.0*

Tank-O3 *fresh water system 2.0* is the environmentally friendly system that makes all micro-organisms harmless in the water itself and, unique!, in the entire tank, from top to bottom, from left to right.

Your tank is absolute **biofilm-free!** Tank-O3 *fresh water system 2.0* produces a small amount of ozone gas on the basis of electrolysis to disinfect the water tank. The ozone gas is created by converting present in the water oxygen (O₂) into ozone (O₃). The treated water is therefore also the “fuel”.

The amount of ozone gas produced by the Tank-O3 *fresh water system 2.0* is so minimal that it is not harmful to health and poses no danger to the environment. **The prerequisite is proper ventilation of the tank.** If this is not present, a separate ventilation to the outside must be installed! Tank-O3 *fresh water system 2.0* works on safe, minimal low voltage, in contrast to ozone generators or UV equipment which all work on the basis of high voltage! With the most common used tank capacity of 100 / 150 liters, the cell current is set to only approx. 50 mA. If the tank content is smaller, the cell current is set proportionally lower (approx. 30 mA), up to 250 liters proportionally higher. With a tank volume greater than 250 liters, we recommend installing 2 or more systems, spread over the tank to distribute the ozone gas well through the tank. The electrolysis unit is installed as centrally and deeply as possible in the water tank.

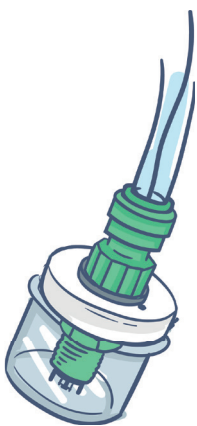
Because ozone gas is active for max. 25 minutes, depending on the temperature and contamination of the tank and the water, diffusion of the ozone gas in the tank water is essential for optimal operation. A major additional advantage of the gas form is that the whole tank, so not only where the water is, but also in the empty part (above the water level, so also the top) is kept completely clean by the ozone gas. And no other system or remedy that is used to keep the tank and the water present clean does so. This is unique!



Unburdening by Tank-O3 *fresh water system 2.0*

We recommend the Tank-O3 *fresh water system 2.0* to run continuously, so 24 hours a day. Given the very low power consumption, this can't hurt. This allows you to simply leave the water in the tank all season long. Do not forget refilling the jar with lime-free water every week / 2 weeks. If your vehicle is standing or stationary for a longer period of time, for example during the winter or between 2 journeys, it is preferable to switch off the Tank-O3 *fresh water system 2.0* (if necessary first descale) and switch it off, this can be done by pulling the plug from the power regulator. In addition, you can empty now the always spotless water tank (and with a risk of frost also the jar). If, after a while, you reset the water tank, start the procedure as described in the next paragraph. At the start of the season or after having not used your vehicle for a longer period of time, first rinse the tank thoroughly, without any additives, fill the tank as usual and switch on the Tank-O3 *fresh water system 2.0*. After installation, you can choose to set the maximum amount of 200 mA for a number of days to have the tank completely clean and germinated as quickly as possible! Then change the water. Depending on the contamination of the tank and assuming the filling with clean drinking water, the whole will be completely spotless within 48 to 72 hours, from top to bottom, from left to right. You can't beat this with brushing in combination with any other means! And what is perhaps most important: **you protect yourself against possible legionella contamination!** When leaving with the vehicle, set the desired number of mA, for tanks up to 150 liters approx 50 mA. From now on you are completely "unburdened" regarding to your water tank and water! Congratulations!

Operation and maintenance of the Tank-O3 *fresh water system 2.0*

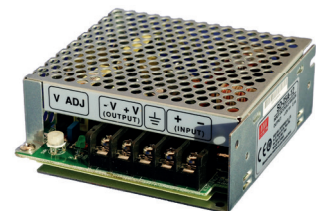


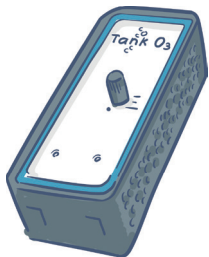
An additional component has been added in the updated lime-free Tank-O3 *fresh water system 2.0*. This ensures that there is no contact with the water in the tank while the installation remains as it always was. Where we previously suffered from limescale in the water and did not know how often the cell core had to be descaled, we no longer have to take this into account with the Tank-O3 *fresh water system 2.0*. A pot is simply placed around the electrolysis unit. This jar is filled with lime-free water. The ozone that is produced escapes through a small hole in the lid and enters the water due to the built-up pressure in the jar. Due to this pressure, no water comes from the tank into the jar. Because the water "evaporates" as it were, we recommend checking once every week / 2 weeks (at 50 mA), preferably at a fixed time (Saturday?) whether there is still enough water in the jar and topping up if necessary, that's all! If necessary, you can simply remove limescale, as before, with a little cleaning vinegar. See "Cleaning Tips". If the yellow light is on, this may be a signal that you need to refill lime-free water! TIP: Check immediately whether you see bubbles in the jar? If so, then everything is fine, if you don't see any bubbles, check the system as indicated in the explanation further on.



The electrolysis may cause the water level meter to become disrupted. Then there are 2 solutions:

- By installing a DC Converter (lwxh: 100x98x37 mm). Ask your dealer or see www.tank-o3.com "Frequently asked questions" 19 and 17.
- Or you interrupt the power supply to the Tank-O3 *fresh water system 2.0* for a short moment (pull the plug from the current regulator) so that the electrolysis current is temporarily lost and the water level meter functions normally.





The flow controller of Tank-O3 *fresh water system 2.0*

Explanation of the indications on the flow controller:

LED light	Meaning	What you can do
Green:	Power	System switched on
Green + Yellow:	Check system	Top up water or check system
Green + Red:	Short circuit	Short circuit, replace cell core

► Green is always on..... BUT IF THE YELLOW LED ALSO GOES ON:

- Is there enough water in the jar?
- Check the connection from the current regulator to the electrolytic cell, is it installed correctly? See Instruction video on www.tank-o3.com "How does it work"
- **You don't see any bubbles?**
Possibly you have a short circuit because there is water between the plug and the connection of the electrolysis unit? Or does the system suffer from limescale on the electrolysis unit?
Dismantle the cell core of the electrolysis unit, you should now see a top on the electrolysis unit, see the top photo above. This may be broken off or heavily discolored due to a short circuit or under the influence of hardened lime, see the bottom photo. If the top is broken off or damaged, we can repair this, see blog 1 on our website with all relevant information, or you can install a completely new electrolysis unit, see <https://www.tank-o3.nl/en/price-list-parts>
- A lot of **limescale** on the cell? Cleaning/descaling with cleaning vinegar.
See opposite or see www.tank-o3.com "Cleaning tips"
- The hose is **not deep (+/- 1,5 cm) and tight enough pressed**, , does this cause water to enter the hose?
Or are the flat sealing rings on both sides of the jar not properly and firmly mounted?
Result: short circuit at the plug in the electrolytic cell. **Solution:** thoroughly dry both the plug and the inside of the electrolysis unit (by blowing). Push the plug back into the electrolysis unit, turn the plug up and down a few times so that the contact is properly restored. And naturally press the hose and sealing rings firmly and well, good luck!
- If a **clamp of the cell core is not properly secured**, it does not make good contact. **Solution:** See below.
- After replacement, check whether the legs of the clamp are firmly secured in the electrolysis unit.
Press each of the two legs of the clamp on a hard surface until you hear a click. Now the clamp is tight!



► Green is always on..... BUT IF THE RED LED ALSO LIGHTS:

- Short circuit in the cell nucleus or cell nucleus used up? Replacing a cell core, see www.tank-o3.com "Replace the cell nucleus"

Replacement of the cell core

(Electrolysis unit: ozone production: max. 16 mg p/h, voltage: 12/24 volts, current: 0 – 200 mA, pressure: max. 16 bar)

In principle, the cell core only needs to be replaced after at least 6 months, that is why we refer you to our website, where it is explained in detail, with some pictures.

See www.tank-o3.com "Replace the cell nucleus". The transparent piece of plastic has a function, so don't delete it.



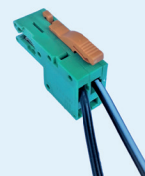
Mounting the John Guest system

The John Guest mounting system consists of a plug-in system. You press the tube with a diameter of 12 mm firmly and deeply (**+/- 1,5 cm**) into the insertion part. Disassembly is almost as easy: Press with your fingers against the raised dark gray edge of the insertion part (see illustration). You can pull the hose out again in no time!

Connecting the power wires to the green plug

Remove approx. 1 cm of cable insulation at the end of both power cables and twist each end into one piece. Now press the supplied screwdriver very deeply into the bottom right hole (so under the orange clip), making it possible to insert the + (pos) cable into the top hole. The + (pos) cable is the wire with the white line in it! By pulling back the supplied screwdriver, the + (pos) cable is clamped. Repeat this operation to insert the completely black – (minus) cable on the left.

For parts and accessories see <https://www.tank-o3.nl/en/price-list-parts>



The unburdening system for
clean and safe water
in an always spotless tank!



Installation instructions through lid (min. Ø 60 mm) in top of tank

Package contents:

Part A : 1 pc. PVC cover grommet 3/8 thread
Part B : 2 pcs. John Guest coupling piece 12 mm - 3/8 thread
Part C : 1 pc. Hose, 33 cm long, Ø 12 mm. To order with 2 or 3 pcs. hose 33 cm + coupling pieces.
Part D : 1 pc. Flow controller LxWxH: 90x36x33 mm
Part E : 1 pc. Electrolysis unit complete with cell core
Part F : 1 pc. Connection cable with fuse (1 Amp) to 12V or 24V point (black/white is + (pos) / black is - (min))

Part G : 1 pc. Connection cable with round plug to electrolysis unit (black/white is + (pos) / black is- (min))
Part H : 3 pcs. EPDM flat sealing ring Ø 12 mm
Part I : 2 pcs. Green connection plugs
Part J : 7 cm Self-adhesive Velcro tape for placement of flow regulator
Part K : Small screwdriver
Part L : Jar Ø 45 mm
Part M : Nut 24 mm 3/8 thread (only for side installation)

Assembly of the Tank-O3 *fresh water system 2.0* in lid (min. 60 mm) in top of tank. See www.tank-o3.com for instructions under "How does it work". Also for non-standard installation in the side of the tank.



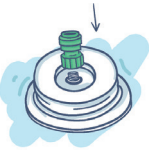
1. Drill a hole of Ø 17 mm in the tank lid at the top of the tank with a spiral or wood speed drill to make the maintenance of the cell core as easy as possible.



2. Cut the hose (C) to length, that means, shorten the hose to the maximum height inside the tank, so from the bottom of the tank to the bottom of the lid, **minus 8 cm**.



3. Insert the PVC cover grommet (A) from above through the 17 mm hole in the cover.



4. Bring a flat sealing ring (H) on inside cover around PVC cover grommet (A) and tighten JG coupling piece (B) on the PVC grommet (A).



5. Now first fit the green connection plug (I) on the connection cable (G). See "Connecting the power wires to the green plug". Now feed the connection cable (G) with the round plug first through the PVC cover grommet (A), through the JG coupling piece (B) and through the custom-made hose (C).



6. Then push the hose (C) (+/- 1.5 cm) firmly into the JG coupling piece (B) on the underside of the cover.

7. Now first assemble the jar (L): Place a flat sealing ring (H) around the electrolysis unit (E) and screw it from below through the hole in the lid of the small jar (L). Press the other flat sealing ring (H) on the outside of the lid onto the electrolysis unit (E) **First** insert the plug of the connecting wire (G) into the electrolysis unit (E). Now screw the JG coupling piece (B) **very firmly** hand-tight onto the electrolysis unit (E) so that it is waterproof. Press the hose (C) as deeply as possible (+/- 1.5 cm) into the JG coupling piece (B).



Assembly sequence:
electrolysis unit, ring, cover, ring, plug in,

JG insert and insert the hose deeply (approx. 1.5 cm) into the JG insert! After filling the jar with lime-free water, turn the jar under the lid.

8. Fill the reservoir with lime-free water almost to the brim. Screw the filled jar **firmly** into the lid from below (hold the lid firmly!) There is a small hole in the lid through which the ozone "escapes" and enters the water. Insert the whole thing into the tank, making sure the jar hangs **flat**! If the jar is hanging at an angle, make sure that the small hole is at the **highest point** so that the ozone gas escapes most quickly there. This is easy because the hose can be rotated in the JG coupling piece.

9. Now mount the green connection plug (I) on the connection cable (F) and mount the fuse on the black/white + (pos) wire close to the continuous power point. Connect the power lead from the 12/24V continuous power point to the Tank-O3 *fresh water system 2.0* digital current controller (D). Now the green LED lights up, the system is working! The **YELLOW LED** may also light up briefly at the first moment of connection, this can take a few minutes. When only the green LED is lit, the Tank-O3 *fresh water system 2.0* is fully and correctly operating. Check after installation or after filling the jar with lime-free water you see air bubbles in the jar. If you see air bubbles, the system is working.

For information and questions: www.tank-o3.com
For parts and accessories see <https://www.tank-o3.nl/en/price-list-parts>

For latest information see blogs on our website.

Other information: approx. 50 mA for tanks up to approx. 150 litres, minimum setting 30 mA for tanks of 30 / 40 litres, proportionally higher setting for tanks up to 250 litres.

The composition of the Tank-O3 *fresh water system 2.0* is for tanks up to 40 cm deep. Also available on order for tanks up to 75 or 105 cm deep. About 90% of motorhomes and caravans have a tank up to 40 cm deep. To protect the environment, we use small packaging, which is why we work with 33 cm long hoses and connectors.

With the supplied piece of self-adhesive Velcro (J) you can attach the digital current controller (D). The small screwdriver (K) is useful when connecting the connecting wires to the green connectors and when replacing the cell nucleus.

Tank-O3 *fresh water system* is onderdeel van



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